



NATIONAL PARK SERVICE

Environmental Audit Program

EnviroCheck Sheet

Respiratory Protection
June 2002 Update

RESPIRATORY PROTECTION

Respirators are used for protection against, and prevention of, occupational diseases caused by exposure to air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, including pesticides. Airborne hazards should be controlled to the extent possible, through elimination or substitution of the hazard, engineering controls to contain the hazard, or work practices that avoid employee exposure to the hazard. Respirators should only be used when one or more of these control methods is not feasible, or in the case of an emergency.

Respiratory protection is required by the Occupational Safety and Health Administration (OSHA) under 29 CFR 1910.134. Park employees may be required to, or may choose to, wear respirators when conducting activities including, but not limited to, any of the following:

- Internal Structure Firefighting
- Asbestos Abatement
- Spray Painting
- Monument Cleaning
- Water and Wastewater Treatment and Sampling
- Entering Permit-Required Confined Spaces
- Lead-Based Paint Removal
- Welding and Metal Grinding

Auditor's Guidelines:

Records to Review

- Written Respiratory Protection Program
- Hazard evaluation
- Medical evaluations
- Fit test evaluations

Features to Observe

- Respirator storage areas
- Areas of chemical use (e.g., drinking water and wastewater treatment plants, sampling stations, and pump stations)
- Respirators
- Paint shops
- Auto shops
- Restoration activities
- MSDSs and chemicals used in above areas

Persons to Contact

- Maintenance supervisor
- Painters
- Wastewater treatment operators
- Buildings and Utilities staff
- Pesticide applicators
- Emergency response personnel
- Safety officer

DEFINITIONS

Fit test: Use of a prescribed protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Hazardous atmosphere: Environment that can cause adverse health effects upon inhalation.

Immediately dangerous to life or health (IDLH): Atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere, including oxygen-deficient atmospheres. Confined spaces can be IDLH.

Respirator: A device designed to provide purified air for breathing.

Air-purifying respirator: Respirator with an air-purifying filter that removes specific contaminants by passing air through the air-purifying element.

Atmosphere-supplying respirator: Respirator that supplies breathing air from a clean source.

Filtering face-piece (dust mask): A negative pressure particulate respirator with a filter as an integral part of the face-piece or with the entire face-piece composed of the filtering medium.

Service life: The period of time that a respirator, filter or other piece of respiratory equipment provides adequate protection to the wearer.

COMPLIANCE REQUIREMENTS

Respiratory Protection Program (RPP) requirements depend on whether employees are *required* to wear respirators (including dust masks), *voluntarily wear respirators* other than dust masks, or *voluntarily wear dust masks*. Respirator use can only be required if engineering controls or other work practices cannot be used to eliminate the respiratory hazard.

- If employees are required to wear respirators (including dust masks), then **all ten elements** listed in Table 1 are applicable to the park.
- If employees voluntarily wear respirators other than dust masks, then only **elements 1, 3, 6, and 10** of Table 1 are applicable to the park. In addition, the park must convey the information in Appendix D of 29 CFR 1910.134 to voluntary respirator wearers (i.e., “Information for Employees Using Respirators When Not Required Under the Standard”).
- If employees voluntarily wear dust masks, then **no elements** of Table 1 are applicable to the park. However, the park must convey the information contained in Appendix D of 29 CFR 1910.134 to its employees.

Table 1: Written Respiratory Protection Program Elements.

Required elements differ based on whether respirator use is required, voluntary, and whether it involves dust masks. More detailed descriptions of each element follow.

RPP Element	Description
1.	Designation of a qualified program administrator.
2.	Procedures for assessing hazards and selecting respirators.
3.	Medical evaluations of employees required to wear respirators.
4.	Fit testing procedures for tight-fitting respirators.
5.	Procedures for proper respirator use.
6.	Procedures and schedules for cleaning, storing, repairing, discarding, and otherwise maintaining respirators.
7.	Procedures to ensure adequate air supply for atmosphere-supplying respirators.
8.	Training employees on respiratory hazards to which they are potentially exposed during routine and emergency situations. Training employees on how to properly use and maintain respirators.
9.	Procedures for regularly evaluating the effectiveness of the respiratory protection program.
10.	Recordkeeping.

1. *Designation of Qualified Program Administrator*

The program administrator should be knowledgeable about the Respiratory Protection Standard, respiratory hazards in the workplace, and how to administer an RPP. While there are no OSHA-approved program administrator training courses, some are offered through trade associations and adult education programs.

2. *Procedures for Assessing Hazards and Selecting Respirators*

An employer must conduct a hazard assessment to determine whether a respirator is needed for a specific task; the assessment can be conducted by an industrial hygienist (either in-house or contracted). The assessment must be documented, supported by data, and include information such as identification of the hazard, the hazard's chemical state and physical form, and an estimate of employees' exposure to the hazard(s).

Based upon the hazard assessment, the park should select NIOSH-certified respirators that can adequately protect employees from the respiratory hazard. For air-purifying respirators used for areas that are not immediately dangerous to life or health (IDLH), filter cartridges must be equipped with a NIOSH-certified end-of-service-life indicator for the contaminant, or the park must establish a filter change schedule consistent with the filter manufacturer's recommendations.

For IDLH atmospheres, the following is required:

- A full face-piece pressure demand self-contained breathing apparatus (SCBA) with a minimum service life of thirty minutes, or a combination full face-piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply must be supplied to employees.
- Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.
- A minimum of two employees must enter the IDLH atmosphere together.
- The two IDLH entrants must remain in continual communication.
- Two attendants must remain outside the IDLH area.
- The attendants must be equipped to, and capable of, monitoring the work being performed, and rescuing the workers in an emergency.

3. *Medical Evaluations*

The physical ability of any employee to use a respirator for the first time and perform their duties must be determined by a licensed health care provider (LHCP), and must be completed before the employee is fit tested or performs work while wearing a respirator. Information regarding the type of respiratory hazards, respirator, and work to be performed must be provided to the medical evaluator. If a LHCP determines that an employee cannot wear a respirator, the park cannot require that the employee wear a respirator for his/her work.

4. *Fit Testing Procedures*

The Respiratory Protection Standard has specific procedures to ensure that respirators with tight-fitting face-pieces have a proper seal with the user's face. Only those employees who have passed their medical evaluations and are required to wear a respirator must take a fit test for the respirator they are required to wear while working.

5. *Procedures for Proper Respirator Use*

The written RPP must include procedures to ensure that respirators are properly used, including:

- Preventing leaks in the respirator facepiece seal (e.g., facial hair).
- Continuing respirator effectiveness (e.g., train employees to leave the area if they need to wash their face).
- Procedures for IDLH atmospheres, if applicable.
- Procedures for interior structural firefighting, if applicable.

6. *Respirator Maintenance*

To help ensure that respirators are in good working order, it is important to establish a respirator maintenance and repair program. These procedures should include whom, how, and how often, one should clean and disinfect, store, inspect, and repair respirators. For instance, respirators should be protected from contamination, dust, sunlight, extreme temperatures, excessive moisture, damaging chemicals, or other destructive conditions, and stored such that their face-pieces or valves do not become deformed. Respirators used for emergencies must be stored in an *accessible* area, but not an area that may become involved in an emergency; they should also be stored in a compartment or cover that is clearly identified as containing emergency equipment.

7. *Adequate Air Supply for Atmosphere-Supplying Respirators*

If atmosphere-supplying respirators are used (i.e., those where air is supplied from a compressed air tank), then the park must develop procedures to ensure that the supplied air meets certain specifications, compressed air cylinders and air processors are used properly, and precautions are put in place to prevent exposure to carbon monoxide.

8. *Employee Training*

All respirator users are required to complete a training program annually (or more often, if needed) that includes the following:

- The respiratory hazards to which they may be potentially exposed.
- How to inspect the respirator for proper function.
- How to don the respirator and adjust straps for proper fit.
- How to perform a positive pressure fit check.
- How to perform a negative pressure fit check.
- How to properly maintain and clean the respirator.
- When to replace filter cartridges for the respirator.

To show that employees have completed a training program, it is best to document that training has taken place, such as by listing the date of training, training content, and the list of attendees.

9. *Regular Evaluation of the Respiratory Protection Program*

The park must evaluate the workplace, as necessary, to ensure that the written RPP is being effectively implemented, and that the program is effective in protecting workers from respiratory hazards (what constitutes a “as necessary” is not specified in the regulations; for auditing purposes assume that it depends upon the nature of park operations and whether they change). Procedures should be put in place to solicit employee information on the program’s effectiveness and identify and fix any problems.

10. *Recordkeeping*

The park must retain the following records on file to demonstrate employee involvement in the RPP, assist the employer in evaluating the effectiveness of the program (as described in 9), and provide a record of compliance for OSHA. These records include:

- Medical evaluation for each employee required to wear a respirator, signed by a licensed health care provider (LHCP).
- Fit testing for each employee that documents type of respirator and cartridge tested, wearer identification, date, test method, identification of tester, and indication of pass/fail.
- Training records, to document the employees that have undergone training over the past 12 months.
- Written Respiratory Protection Program.

POLLUTION PREVENTION

- Evaluate the possibility of substituting chemicals, the storage, handling, use, and disposal of which, require the operative to utilize respiratory protection.
- Explore potential engineering controls that would eliminate the need for respiratory protection.

FOR ADDITIONAL INFORMATION

- Small Entity Compliance Guide for the Respiratory Protection Standard <<http://www.osha.gov/html/comp-guides.html>>.
- OSHA Hotline: Referral Service for OSHA programs, 800-321-6742.



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CHECKLIST ITEM	PRIORITY	NOTES
<i>Applicability</i>		
1. If park staff uses chemicals, conducts activities that generate dust, or conducts other activities for which respirators may be required, a hazard assessment has been conducted to determine the need for respirators. [29 CFR 1910.134(d)(1)(iii)]	1	
2. If a hazard assessment indicates that respirators are needed, park staff has investigated whether engineering controls or other means can be used to eliminate the respiratory hazard. [29 CFR 1910.134(a)(1)]	2	
3. If respirators are required, park staff has been supplied with respirators appropriate for the areas in which they are working. [29 CFR 1910.134(a)(2)]	2	
<i>Respiratory Protection Program</i>		
<i>Questions 4-24 apply only at parks where respirators are worn, or are required to be worn.</i>		
4. The park has a qualified program administrator to oversee the respiratory protection program. [29 CFR 1910.134(c)(3)]	2	
5. If park staff voluntarily use or are required to use respirators, the park has established and implemented a written respiratory protection program with worksite-specific procedures. [29 CFR 1910.134(c)(1)]	2	
6. Those who voluntarily use respirators are supplied with information in Appendix D of 29 CFR 1910.134 [29 CFR 1910.134(c)(2)(i)]	2	
<i>Fit Testing and Medical Evaluations</i>		
7. An LHCP conducts medical evaluations to determine the employee's ability to use a respirator before the employee is fit tested or required to use a respirator. [29 CFR 1910.134(e)(1)]	2	
8. Those using tight-fitting face-piece respirators are given an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT). [29 CFR 1910.134(f)(1)]	2	
9. Those using tight-fitting face-piece respirators are fit tested annually. [29 CFR 1910.134(f)(2)]	2	
10. The park does not permit respirators with tight-fitting face pieces to be worn by those who have facial hair or wear corrective glasses or goggles that come between the sealing surface of the face piece and the face or that interfere with valve function. [29 CFR 1910.134(g)(1)]	2	
<i>Storage and Maintenance</i>		
11. All respirators provided are clean, sanitary, and in good working order, and cartridges have not passed expiration dates. [29 CFR 1910.134(h)(1)]	1	
12. All respirators are stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and are packed or stored to prevent deformation of the face piece and exhalation valve. [29 CFR 1910.134(h)(2)]	2	
13. Respirators to be used in emergencies are accessible in the work area, but not in an area that may become inaccessible (e.g., due to an emergency). [29 CFR 1910.134(h)(2)(ii)(A)]	2	

This document does not necessarily contain all information needed to determine compliance status.

CHECKLIST ITEM	PRIORITY	NOTES
14. Respirators to be used in emergencies are stored in compartments or covers that are clearly marked as containing emergency respirators. [29 CFR 1910.134(h)(2)(ii)(B)]	2	
15. Filters, cartridges and canisters used in the workplace remain labeled and color-coded with the NIOSH approval label. [29 CFR 1910.134(j)]	2	
16. There are procedures in place for atmosphere-supplying respirators to ensure that the supplied air is of good quality, compressed air cylinders and air processors are used properly, and precautions are in place to prevent exposure to carbon monoxide. [29 CFR 1910.134(i)]	2	
<i>Evaluations, Inspections and Training</i>		
17. Respirators that are to be used in emergency situations are inspected at least monthly. [29 CFR 1910.134(h)(3)(i)(B)]	2	
18. Training on respirator-use is conducted annually. [29 CFR 1910.134(k)]	2	
19. Evaluations are conducted, as necessary, to ensure that the current written program is being effectively implemented. [29 CFR 1910.134(l)(1)]	2	
20. Park staff is regularly consulted to assess the employees' views on program effectiveness and to identify any problems. [29 CFR 1910.134(l)(2)]	2	
<i>Recordkeeping</i>		
21. Records of medical evaluations are retained. [29 CFR 1910.134(m)(1)]	2	
22. Records of the qualitative and quantitative fit tests are retained. [29 CFR 1910.134(m)(2)]	2	
23. There is a current copy of the respiratory protection program. [29 CFR 1910.134(m)(3)]	2	
24. There is a method in which to record whether respirator wearers have undergone training over the past 12 months (e.g., training records). [29 CFR 1910.134(k)(4)]	2	

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